



1.

# SEQUENCE LISTING

RECEIVED  
AUG 03 2001  
TECH CENTER 1600/2900

<110> Skolnick, Jeffrey  
Fetrow, Jacquelyn S.

<120> METHODS AND SYSTEM FOR PREDICTING  
PROTEIN FUNCTION

<130> 10886-047001

<140> 09/322,067

<141> 1999-05-27

<150> 60/099,300

<151> 1998-08-25

<150> 60/120,311

<151> 1999-02-16

<160> 12

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 130

<212> PRT

<213> Haemophilus influenzae

<400> 1

Met	Met	Tyr	Ser	Lys	Leu	Leu	Thr	Leu	Thr	Thr	Leu	Leu	Leu	Pro	Thr
1				5				10						15	
Ala	Leu	Ala	Leu	Pro	Ser	Leu	Val	Glu	Arg	Ala	Cys	Asp	Tyr	Thr	Cys
			20					25					30		
Gly	Ser	Asn	Cys	Tyr	Ser	Ser	Ser	Asp	Val	Ser	Thr	Ala	Gln	Ala	Ala
		35					40					45			
Gly	Tyr	Gln	Leu	His	Glu	Asp	Gly	Glu	Thr	Val	Gly	Ser	Asn	Ser	Tyr
	50				55					60					
Pro	His	Lys	Tyr	Asn	Asn	Tyr	Glu	Gly	Phe	Asp	Phe	Ser	Val	Ser	Ser
65				70				75						80	
Pro	Tyr	Tyr	Glu	Trp	Pro	Ile	Leu	Ser	Ser	Gly	Asp	Val	Tyr	Ser	Gly
			85					90						95	
Gly	Ser	Pro	Gly	Ala	Asp	Arg	Val	Val	Phe	Asn	Glu	Asn	Asn	Gln	Leu
		100					105					110			
Ala	Gly	Val	Ile	Thr	His	Thr	Gly	Ala	Ser	Gly	Asn	Asn	Phe	Val	Glu
		115					120					125			
Cys	Thr														
	130														

<210> 2

<211> 107

<212> PRT

<213> Haemophilus influenzae

<400> 2

Gln	Ser	Ala	Thr	Thr	Cys	Gly	Ser	Thr	Asn	Tyr	Ser	Ala	Ser	Gln	Val
1					5				10					15	

Arg Ala Ala Ala Asn Ala Ala Cys Gln Tyr Tyr Gln Asn Asp Asp Ser  
                   20                  25                  30  
 Ala Gly Ser Thr Thr Tyr Pro His Thr Tyr Asn Asn Tyr Glu Gly Phe  
                   35                  40                  45  
 Asp Phe Pro Val Asp Gly Pro Tyr Gln Glu Phe Pro Ile Lys Ser Gly  
                   50                  55                  60  
 Gly Val Tyr Thr Gly Gly Ser Pro Gly Ala Asp Arg Val Val Ile Asn  
 65                  70                  75                  80  
 Thr Ile Asn Cys Glu Tyr Ala Gly Ala Ile Thr His Thr Gly Ala Ser  
                   85                  90                  95  
 Gly Asn Asn Phe Val Gly Cys Ser Gly Thr Asn  
                   100                  105

<210> 3

<211> 105

<212> PRT

<213> Haemophilus influenzae

<400> 3

Glu Ser Cys Glu Tyr Thr Cys Gly Ser Thr Cys Tyr Trp Ser Ser Asp  
   1                  5                  10                  15  
 Val Ser Ala Ala Lys Ala Lys Gly Tyr Ser Leu Tyr Glu Ser Gly Asp  
                   20                  25                  30  
 Thr Ile Asp Asp Tyr Pro His Gly Tyr His Asp Tyr Glu Gly Phe Asp  
                   35                  40                  45  
 Phe Pro Val Ser Gly Thr Tyr Tyr Glu Tyr Pro Ile Met Ser Asp Tyr  
                   50                  55                  60  
 Asp Val Tyr Thr Gly Gly Ser Pro Gly Ala Asp Arg Val Ile Phe Asn  
 65                  70                  75                  80  
 Gly Asp Asp Glu Leu Ala Gly Val Ile Thr His Thr Gly Ala Ser Gly  
                   85                  90                  95  
 Asp Asp Phe Val Ala Cys Ser Ser Ser  
                   100                  105

<210> 4

<211> 113

<212> PRT

<213> Haemophilus influenzae

<400> 4

Cys Asn Ile Pro Glu Ser Thr Asn Cys Gly Gly Asn Val Tyr Ser Asn  
   1                  5                  10                  15  
 Asp Asp Ile Asn Thr Ala Ile Gln Gly Ala Leu Asp Asp Val Ala Arg  
                   20                  25                  30  
 Pro Asp Gly Asp Asn Tyr Pro His Gln Tyr Tyr Asp Glu Ala Ser Glu  
                   35                  40                  45  
 Asp Ile Thr Leu Cys Cys Gly Pro Gly Ser Trp Ser Glu Phe Pro Leu  
                   50                  55                  60  
 Val Tyr Asn Gly Pro Tyr Tyr Ser Ser Arg Asp Asn Tyr Val Ser Pro  
 65                  70                  75                  80  
 Gly Pro Asp Arg Val Ile Tyr Gln Thr Asn Thr Gly Glu Phe Cys Ala  
                   85                  90                  95  
 Thr Val Thr His Thr Gly Ala Ala Ser Tyr Asp Gly Phe Thr Gln Cys  
                   100                  105                  110  
 Ser

<210> 5  
 <211> 104  
 <212> PRT  
 <213> Haemophilus influenzae

<400> 5  
 Asp Cys Asp Tyr Thr Cys Gly Ser His Cys Tyr Ser Ala Ser Ala Val  
 1 5 10 15  
 Ser Asp Ala Gln Ser Ala Gly Tyr Gln Leu Glu Ser Ala Gly Gln Ser  
 20 25 30  
 Val Gly Arg Ser Arg Tyr Pro His Gln Tyr Arg Asn Tyr Glu Gly Phe  
 35 40 45  
 Asn Phe Pro Val Ser Gly Asn Tyr Tyr Glu Trp Pro Ile Leu Ser Ser  
 50 55 60  
 Gly Ser Thr Tyr Asn Gly Gly Gly Pro Gly Ala Asp Arg Val Val Phe  
 65 70 75 80  
 Asn Asp Asn Asp Glu Leu Ala Gly Leu Ile Thr His Thr Gly Ala Ser  
 85 90 95  
 Gly Asp Gly Phe Val Ala Cys Tyr  
 100

<210> 6  
 <211> 102  
 <212> PRT  
 <213> Haemophilus influenzae

<400> 6  
 Ala Cys Ala Ala Thr Cys Gly Thr Val Cys Tyr Thr Ser Ser Ala Ile  
 1 5 10 15  
 Ser Ser Ala Gln Ala Ala Gly Tyr Asn Leu Tyr Ser Thr Asn Asp Asp  
 20 25 30  
 Val Ser Asn Tyr Pro His Glu Tyr His Asn Tyr Glu Gly Phe Asp Phe  
 35 40 45  
 Pro Val Ser Gly Thr Tyr Tyr Glu Phe Pro Ile Leu Lys Ser Gly Lys  
 50 55 60  
 Val Tyr Thr Gly Ser Ser Pro Gly Ala Asp Arg Val Ile Phe Asn Asp  
 65 70 75 80  
 Asp Asp Glu Leu Ala Gly Val Ile Thr His Thr Gly Ala Ser Gly Asn  
 85 90 95  
 Asn Phe Val Ala Cys Thr  
 100

<210> 7  
 <211> 102  
 <212> PRT  
 <213> Haemophilus influenzae

<400> 7  
 Ala Cys Ala Ala Thr Cys Gly Ser Val Cys Tyr Thr Ser Ser Ala Ile  
 1 5 10 15  
 Ser Ala Ala Gln Glu Ala Gly Tyr Asp Leu Tyr Ser Ala Asn Asp Asp  
 20 25 30  
 Val Ser Asn Tyr Pro His Glu Tyr Arg Asn Tyr Glu Gly Phe Asp Phe  
 35 40 45  
 Pro Val Ser Gly Thr Tyr Tyr Glu Phe Pro Ile Leu Arg Ser Gly Ala  
 50 55 60  
 Val Tyr Ser Gly Asn Ser Pro Gly Ala Asp Arg Val Val Phe Asn Gly

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65          70          75          80
Asn Asp Gln Leu Ala Gly Val Ile Thr His Thr Gly Ala Ser Gly Asn
          85          90          95
Asn Phe Val Ala Cys Asp
          100

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<210> 8
<211> 104
<212> PRT
<213> Haemophilus influenzae
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[illegible]

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<210> 9
<211> 105
<212> PRT
<213> Haemophilus influenzae
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<400>	9														
Gln	Gly	Gly	Val	Ser	Val	Asn	Cys	Gly	Gly	Thr	Tyr	Tyr	Ser	Ser	Thr
1				5					10					15	
Gln	Val	Asn	Arg	Ala	Ile	Asn	Asn	Ala	Lys	Ser	Gly	Gln	Tyr	Ser	Ser
			20					25					30		
Thr	Gly	Tyr	Pro	His	Thr	Tyr	Asn	Asn	Tyr	Glu	Gly	Phe	Asp	Phe	Ser
			35				40					45			
Asp	Tyr	Cys	Asp	Gly	Pro	Tyr	Lys	Glu	Tyr	Pro	Leu	Lys	Thr	Ser	Ser
	50					55					60				
Ser	Gly	Tyr	Thr	Gly	Gly	Ser	Pro	Gly	Ala	Asp	Arg	Val	Val	Tyr	Asp
65					70					75					80
Ser	Asn	Asp	Gly	Thr	Phe	Cys	Gly	Ala	Ile	Thr	His	Thr	Gly	Ala	Ser
				85					90					95	
Gly	Asn	Asn	Phe	Val	Gln	Cys	Ser	Tyr							
			100					105							

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<210> 10
<211> 177
<212> PRT
<213> Haemophilus influenzae
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```
<400> 10
Met Val Ala Ile Lys Asn Leu Val Leu Val Ala Leu Thr Ala Val Thr
  1             5             10             15
Ala Leu Ala Val Pro Ser Pro Leu Glu Ala Arg Ala Val Thr Trp Thr
```

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<210> 11
<211> 177
<212> PRT
<213> Haemophilus influenzae
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[illegible]

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<210> 12
<211> 176
<212> PRT
<213> Haemophilus influenzae
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&lt;400&gt; 12

Met	Val	Ala	Ile	Lys	Asn	Leu	Phe	Leu	Leu	Ala	Ala	Thr	Ala	Val	Ser
1				5					10					15	
Val	Leu	Ala	Ala	Pro	Ser	Pro	Leu	Asp	Ala	Arg	Ala	Thr	Trp	Thr	Cys
			20					25					30		
Ile	Asn	Gln	Gln	Leu	Asn	Pro	Lys	Thr	Asn	Lys	Trp	Glu	Asp	Lys	Arg
		35					40					45			
Leu	Leu	Tyr	Ser	Gln	Ala	Lys	Ala	Glu	Ser	Asn	Ser	His	His	Ala	Pro
	50					55				60					
Leu	Ser	Asp	Gly	Lys	Thr	Gly	Ser	Ser	Tyr	Pro	His	Trp	Phe	Thr	Asn
65					70					75					80
Gly	Tyr	Asp	Gly	Asn	Gly	Lys	Leu	Ile	Lys	Gly	Arg	Thr	Pro	Ile	Lys
				85					90					95	
Phe	Gly	Lys	Ala	Asp	Cys	Asp	Arg	Pro	Pro	Lys	His	Ser	Gln	Asn	Gly
			100					105					110		
Met	Gly	Lys	Asp	Asp	His	Tyr	Leu	Leu	Glu	Phe	Pro	Thr	Phe	Pro	Asp
	115						120					125			
Gly	His	Asp	Tyr	Lys	Phe	Asp	Ser	Lys	Lys	Pro	Lys	Glu	Asp	Pro	Gly
	130						135				140				
Pro	Ala	Arg	Val	Ile	Tyr	Thr	Tyr	Pro	Asn	Lys	Val	Phe	Cys	Gly	Ile
145					150					155					160
Val	Ala	His	Gln	Arg	Gly	Asn	Gln	Gly	Asp	Leu	Arg	Leu	Cys	Ser	His
				165					170					175	